

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference BP/G-33314A/BCK	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2004/009067	International filing date (day/month/year) 12/08/2004	(Earliest) Priority Date (day/month/year) 13/08/2003
Applicant SANDOZ AG		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 05 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☒ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
- a. type of material
- ☒ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☒ in written format
- ☒ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed
- ☐ filed together with the international application in computer readable form
- ☒ furnished subsequently to this Authority for the purpose of search
2. ☒ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N15/63 C12N15/21 C07K14/56

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, MEDLINE, EMBASE, CHEM ABS Data, SCISEARCH, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>BOURDINEAUD J P ET AL: "CYTOPLASMIC AND PERIPLASMIC EXPRESSION OF A SYNTHETIC GENE FOR FERREDOXIN IN ESCHERICHIA-COLI" BIOCHIMIE (PARIS), vol. 72, no. 6-7, 1990, pages 407-415, XP002316190 ISSN: 0300-9084 *Whole document, in particular: Abstract; page 410, left hand column, last paragraph-page 411, right hand column, first full paragraph; Discussion and figure 3*</p> <p style="text-align: center;">----- -/--</p>	1-41

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *G* document member of the same patent family

Date of the actual completion of the international search

18 February 2005

Date of mailing of the international search report

04/03/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WEICKERT M J ET AL: "OPTIMIZATION OF HETEROLOGOUS PROTEIN PRODUCTION IN ESCHERICHIA COLI" CURRENT OPINION IN BIOTECHNOLOGY, LONDON, GB, vol. 7, no. 5, 1996, pages 494-499, XP000995157 ISSN: 0958-1669 *Whole document, in particular: Abstract and table 1*	1-41
A	HUMPHREYS D P ET AL: "High-Level Periplasmic Expression in Escherichia coli Using a Eukaryotic Signal Peptide: Importance of Codon Usage at the 5' End of the Coding Sequence" PROTEIN EXPRESSION AND PURIFICATION, ACADEMIC PRESS, SAN DIEGO, CA, US, vol. 20, no. 2, November 2000 (2000-11), pages 252-264, XP004435483 ISSN: 1046-5928 *whole document, in particular: Abstract, table 1 and figure 1*	1-41
A	MATSUDA A ET AL: "MOLECULAR CLONING AND STRUCTURE OF THE GENE FOR 7-BETA-4 CARBOXYBUTANAMIDOCEPHALOSPORANIC-ACID ACYLASE FROM A PSEUDOMONAS STRAIN" JOURNAL OF BACTERIOLOGY, vol. 163, no. 3, 1985, pages 1222-1228, XP002316191 ISSN: 0021-9193 *Whole document, in particular: Abstract and figure 5*	1-41
A	US 5 710 027 A (HAUPTMANN ET AL) 20 January 1998 (1998-01-20) *whole document, in particular: Abstract and claims*	1-41

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5710027	A	20-01-1998	DE	4329756 A1	09-03-1995
			CA	2124271 A1	27-11-1994
			CN	1099799 A	08-03-1995
			EP	0626448 A2	30-11-1994
			FI	942419 A	27-11-1994
			HU	70311 A2	28-09-1995
			JP	7135992 A	30-05-1995
			PL	303611 A1	27-12-1994
